

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) ~~The transponder of claim 1, further comprising~~ An electromagnetic transponder intended to draw power for its operation from a field radiated by a terminal of transmission of a carrier at a first frequency, and to back-modulate a received signal at a rate of a sub-carrier at a second frequency lower than the first one, the transponder comprising:

means for demodulating signals transmitted by another transponder and modulated by said sub-carrier and means for decoding said signals;

an oscillating circuit upstream of a rectifying means capable of providing a D.C. supply voltage to an electronic circuit, the electronic circuit having means for transmitting digitally-coded information; and

~~the transponder comprising~~ a demodulator capable of differentiating information received at a rate of said sub-carrier which is a back-modulation sub-carrier of said another transponder with respect to information received, at a rate of a third still lower frequency, from the terminal.

3. (Original) The transponder of claim 2 wherein said demodulator comprises two parallel branches, each having a filter respectively centered on the second and third frequencies, each filter being associated with a digital decoder.

4. (Original) The transponder of claim 3 wherein a first decoder associated with the filter centered on the back-modulation frequency is a decoder of phase shift type, a second decoder associated with the third frequency being a decoder of amplitude shift type.

5. – 8. (Canceled)

9. (Currently Amended) The transponder of claim ~~8~~12 wherein the first circuit includes:

a first capacitor and inductor connected in parallel;

a rectifier circuit having input terminals coupled to the parallel connection of the capacitor and inductor;

a second capacitor coupled to output terminals of the rectifier circuit; and

a voltage regulator coupled to the second capacitor and to the rectifier circuit.

10. (Currently Amended) The transponder of claim ~~8~~12, further comprising a fifth circuit coupled to the first circuit to transmit a fourth signal.

11. (Original) The transponder of claim 10 wherein the fifth circuit includes a modulator having an output coupled to a transistor.

12. (Currently Amended) ~~The transponder of claim 8, further comprising A~~
transponder, comprising:

a first circuit to receive a first signal having a first frequency and to provide power from the first signal;

a second circuit coupled to the first circuit to receive a second signal having a second frequency;

a third circuit coupled to the first circuit and coupled parallel to the second circuit to receive a third signal having a third frequency, the third signal being received from another transponder;

an analog unit coupled to the second and third circuits to respectively provide the second and third signals to be demodulated by either the second or third circuits, wherein the second circuit includes a decoder to detect the second frequency of and to demodulate the second signal provided by the analog unit, and wherein the third circuit includes a decoder to detect the third frequency of and to demodulate the third signal provided by the analog unit; and
a fourth circuit coupled to the second and third circuits to respectively process the demodulated second and third signals.

13. (Currently Amended) ~~The transponder of claim 8~~ A transponder,
comprising:

a first circuit to receive a first signal having a first frequency and to provide power from the first signal;

a second circuit coupled to the first circuit to receive a second signal having a second frequency;

a third circuit coupled to the first circuit and coupled parallel to the second circuit to receive a third signal having a third frequency, the third signal being received from another transponder, wherein the second circuit includes:

a first filter centered at the second frequency to filter the second signal; and

a first decoder coupled to the first filter to demodulate the filtered second signal,
and wherein the third circuit includes:

a second filter centered at the third frequency to filter the third signal; and

a second decoder coupled to the second filter to demodulate the filtered third
signal, the transponder further including:

a fourth circuit coupled to the second and third circuits to respectively process the demodulated second and third signals.

14. (Original) The transponder of claim 13 wherein the first decoder comprises a phase shift-type decoder, and wherein the second decoder comprises an amplitude shift-type decoder.

15. (Currently Amended) The transponder of claim ~~8~~13 wherein the first frequency is higher than the second frequency, and wherein the second frequency is higher than the third frequency.

16. (Canceled)

17. (Currently Amended) ~~The method of claim 16~~ A method for a transponder, the method comprising:

at said transponder, receiving a first signal having a first frequency and providing power from the first signal;

at said transponder, receiving a second signal having a second frequency and demodulating the received second signal;

at said transponder, receiving a third signal having a third frequency from another transponder and distinguishing the received third signal from the second signal and demodulating the received third signal; and

at said transponder, processing the demodulated second or third signals,

wherein distinguishing the received third signal from the second signal includes detecting whether a received signal is the third signal or the second signal based on the frequency of the received signal by using parallel decoders, one of which decodes based on the second frequency and the other one of which decodes based on the third frequency.

18. – 19. (Canceled)

20. (Currently Amended) The system of claim ~~19~~21 wherein the means for demodulating the second and third signals include ~~a~~ means in parallel for decoding the second and third signals separately.

21. (Currently Amended) ~~The system of claim 19, further comprising A~~
system for a transponder, the system comprising:

means in said transponder for receiving a first signal having a first frequency and
for providing power from the first signal;

means in said transponder for receiving a second signal having a second
frequency and for demodulating the received second signal;

means in said transponder for receiving a third signal having a third frequency
from another transponder and for distinguishing the received third signal from the second signal
and for demodulating the received third signal;

means in said transponder for processing the demodulated second or third signals;
and

terminal means for supplying said first signal to said transponder to power said
~~first~~ transponder and further for supplying said first signal to said another transponder to power
said another transponder, said transponder and said another transponder being in a same
electromagnetic field of said terminal means as provided by said first signal.